

CLAIMS

1. An isolated protein which mediates *Plasmodium falciparum* ring-stage adhesion to endothelial cells and is approximately 200 kilodaltons in size as determined by SDS-polyacrylamide gel electrophoresis.

2. An isolated protein which mediates *Plasmodium falciparum* ring-stage adhesion to endothelial cells and is approximately 40 kilodaltons in size as determined by SDS-polyacrylamide gel electrophoresis.

3. An antibody which binds to the isolated protein of Claim 1 or 2.

4. The antibody of Claim 3 which is a monoclonal antibody.

5. The antibody of Claim 4, which is a polyclonal antibody.

6. A method of detecting the presence of a Plasmodium species in a sample comprising:

contacting said sample with the antibody of Claim 3; and

identifying an interaction between the antibody and the Plasmodium species in said sample, wherein said interaction indicates the presence of the Plasmodium species.

7. The method of Claim 6, wherein said Plasmodium species is *Plasmodium falciparum*.

8. The method of Claim 6, wherein said antibody is coupled to a detectable moiety.

9. The method of Claim 6, wherein said sample is obtained from a human patient suspected of having malaria.

10. A method of detecting the presence of a Plasmodium antibody in a sample comprising:

contacting said sample with the isolated protein of Claim 1 or Claim 2; and

identifying an interaction between the protein and the Plasmodium antibody in said sample, wherein said interaction indicates the presence of the Plasmodium.

11. The method of Claim 10, wherein said Plasmodium is *Plasmodium falciparum*.

12. The method of Claim 10, wherein said protein is coupled to a detectable moiety.

13. The method of Claim 10, wherein said sample is obtained from a human patient suspected of having malaria.

14. A method of diagnosing the *Plasmodium falciparum* blood-stage cycle in an individual suspected of being infected with *Plasmodium falciparum* comprising:

obtaining a biological sample from said individual;

contacting said sample with the antibody of Claim 3; and

identifying an interaction between the antibody and an antigen in said sample, wherein said interaction indicates a ring-stage infection.

15. A method of diagnosing the *Plasmodium falciparum* blood-stage cycle in an individual suspected of being infected with *Plasmodium falciparum* comprising:

obtaining a biological sample from said individual;

contacting said sample with the protein of Claims 1 or 2; and

identifying an interaction between the protein and an antibody in said sample, wherein said interaction indicates a ring-stage infection.

16. A composition comprising at least one of the isolated proteins RSP-1 and RSP-2 and a pharmaceutical acceptable carrier.

17. The composition of Claim 16, which is an immunogenic composition

18. The composition of Claim 16, which is a vaccine.

19. A method of protecting an individual against a *Plasmodium falciparum* infection comprising:

administering the at least one of the isolated proteins RSP-1 and RSP-2 to said individual in an amount sufficient to induce an immune response in said individual.

20. The method of Claim 19, wherein said administering further comprises administering an adjuvant.

21. The method of Claim 19, wherein said administering is performed one or more times.

22. Hybridoma Pf 26G1/B4 deposited at the C.N.C.M under the accession number I-2635.

23. A method of diagnosing the *Plasmodium falciparum* blood-stage cycle in an individual suspected of being infected with *Plasmodium falciparum* comprising:

obtaining a biological sample from said individual;

contacting said sample with the antibody of Claim 22; and

identifying an interaction between the antibody and an antigen in said sample,
wherein said interaction indicates a ring-stage infection.

10. The method of claim 9, wherein the sample is a blood smear.